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EXAMINER

LU, CHARLES EDWARD

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Continuation of Disposition of Claims: Claims subject to restriction and/or election requirement are 1-34,45-61,64,68,69,109-112,127-138 and 151.

DETAILED ACTION

1. This Action is in response to the election dated 8/11/2008. In the election with traverse, Applicant observed that claims 129-130 were not listed in the previous restriction requirement. Applicant is thanked for making the observation. As such, the previous restriction requirement is withdrawn. Claims 1-34, 45-61, 64, 68, 69, 109-112, 127-138 and 151 are still pending and subject to restriction. It is believed that this restriction requirement is complete.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I

A system, computer program, or data structure drawn to a knowledge discovery engine where relationships between two or more integrated objects are identified, retrieved, grouped, ranked, filtered and numerically evaluated. Claims 1-29, 45-61, 64, 68-69, 109, 111, 127-130, 133-135, and 151, classified in class 707, subclass 2.

Group II

A system drawn to a knowledge discovery engine that recognizes relationships and identifies one or more co occurrences of objects within the data source, and identifies implicit relationships between the objects. Claims 30-34, 45-61, 64, 68-69, and 151, classified in class 707, subclass 102.

Group III

A computer program drawn to constructing a database of lexical variants, scanning an object-relationship database with a database of lexical variants to add synonyms; and assigning each object a unique numeric ID and storing relationships by lowest ID first; and checking the object-relationship database for errors. Claim 110, classified in class 707, subclass 7.

Group IV

A data structure drawn to generating a comprehensive network of relationships and storing the shared relationships evaluated by one or more statistical bounded network models, wherein a query is performed on the shared relationships to identify novel relationships from the comprehensive network of relationships. Claim 112, classified in class 707/104.1.

Group V

A method drawn to identifying objects directly and indirectly related to query objects and quantitatively evaluating each implicitly related object to determine a probability that it shares a meaningful relationship with the query object by deriving an importance score and a veracity score. Claims 136-138, classified in class 707, subclass 5.

The inventions are distinct, each from the other because of the following reasons:

Groups I - V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, Group I has a separate utility such as identifying, retrieving, grouping, ranking, filtering and numerically evaluating relationships between objects. Group II has a separate utility such as identifying co-occurrences of objects and implicit relationships between objects. Group III has a separate utility such as constructing a database of lexical variants, scanning an object-relationship database with a database of lexical variants to add synonyms, assigning each object a unique numeric ID and storing relationships by lowest ID first; and checking the object-relationship database for errors. Group IV has a separate utility such as generating a comprehensive network of relationships and storing the shared relationships evaluated by one or more statistical bounded network models, wherein a query is performed on the shared relationships to identify novel relationships from the comprehensive network of relationships. Group V has a separate utility such as identifying objects directly and indirectly related to query objects and quantitatively evaluating each implicitly related object to determine a probability that it shares a meaningful relationship with the query object by deriving an importance score and a veracity score. As discussed above, each group has a materially different design, mode of operation, function, or effect. The inventions as claimed do not encompass overlapping subject matter. Each group does not require the particulars of the other groups. Furthermore, the inventions as claimed do not appear to be obvious variants,

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and there is nothing of record to show them to be obvious variants. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. Furthermore, the search required for each group would be different. There would be a serious burden on the examiner if restriction was not required.

There would be a serious burden at least because it would be necessary to search for one of the inventions in a manner that is not likely to result in finding art pertinent to the other invention(s) (e.g., searching different classes /subclasses or electronic resources, or employing different search queries, a different field of search is shown, even though the two are classified together). For example, the field of search/queries for Group I would be drawn to identifying, retrieving, grouping, ranking, filtering and numerically evaluating relationships between objects. The field of search for Group II would be drawn to identifying co-occurrences of objects and implicit relationships between objects. The field of search for Group III would be drawn to constructing a database of lexical variants, scanning an object-relationship database with a database of lexical variants to add synonyms, assigning each object a unique numeric ID and storing relationships by lowest ID first; and checking the object-relationship database for errors. The field of search for Group IV would be drawn to generating a comprehensive network of relationships and storing the shared relationships evaluated by one or more statistical bounded network models, wherein a

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query is performed on the shared relationships to identify novel relationships from the comprehensive network of relationships. Finally, the field of search for Group V would be drawn to identifying objects directly and indirectly related to query objects and quantitatively evaluating each implicitly related object to determine a probability that it shares a meaningful relationship with the query object by deriving an importance score and a veracity score. As discussed above, the fields of search for each of the groups would be completely different.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Lu whose telephone number is (571) 272-8594. The examiner can normally be reached on 8:30 - 5:00; M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached at (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Charles E Lu/
Examiner, Art Unit 2161
11/18/2008

/Apu M Mofiz/
Supervisory Patent Examiner, Art Unit 2161